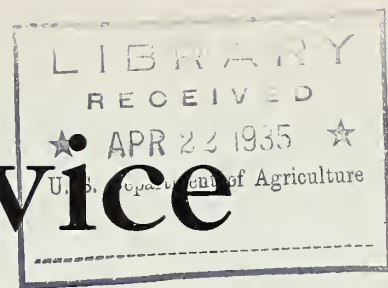


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Extension Service Review



VOL. 6, NO. 3

MARCH 1935



BUILDING THE TERRACES WHICH SAVE GEORGIA LAND.

ISSUED MONTHLY BY THE EXTENSION SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D. C.



In This Issue

THE UNITED STATES has long needed a definite, consistent, and unified land policy. In recent years, the conviction has grown that the great wastes, both of natural and human resources, growing out of the misuse of the land should not be permitted to continue and that our land resources, as a matter of sound public policy, should be put to those uses for which they are economically and socially better adapted.

Increasingly, the public has recognized our need for a large area of public forests, wildlife and game refuges, and park and recreational areas, in which land too poor for continued farming could well be devoted. Recognizing the vital importance of developing and applying an aggressive policy for better use of our land resources, the Federal Government has inaugurated a land-planning program of wide implication, in the conduct of which the Department of Agriculture and cooperating State experiment stations, extension services, and other State agencies are playing a leading part.

Most of this number of the Extension Service Review is devoted to various phases of land utilization. Secretary Wallace comments briefly on some of the most important recommendations in the 455-page report of the National Resources Board. On the inside of the back cover page appears an excerpt from the introduction to this report which explains why it is considered to be the most significant and comprehensive statement ever issued covering the use of our lands. Some of the most important recommendations are illustrated on the picture page.

The terracing program in Georgia and the success it has had in conserving the soil resources of the State, are described by Extension Director Harry L. Brown.

The relation of wildlife to the land and to the farmer is explained by Chief "Ding" Darling of the Biological Survey. J. F. Cox of the A. A. A. explains how the 1935 adjustment contracts will affect the use of farm land. The

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Wisconsin's rural zoning program and Hawaii's efforts to solve their land problems are described.

Planning to conduct adjustment operations on a regional basis has recently been given a great deal of careful thought by the A. A. A. F. F. Elliott covers the subject in his frank statement of the advantages and difficulties involved in regionalizing adjustment programs. Extension workers interested in obtaining published or visual material concerning land use will find a suggestive list on the back page.



On The Calendar

Women's National Farm and Garden Association, Pittsburgh, Pa., second week in May.

American Association for Adult Education, Milwaukee, Wis., May 20-22.

Montana Livestock Growers Association, Great Falls, Mont., May 23.

American Association for the Advancement of Science, Minneapolis, Minn., June.

American Home Economics Meeting, Chicago, Ill., June.

National 4-H Club Camp, Washington, D. C., June 13-19.

National Education Association, Department of Rural Education and Home Economics, Denver, Colo., June 30-July 5.

American Association of University Women, Los Angeles, Calif., June 23-30.

American Dietetics Association, Cleveland, Ohio, October.

AN AVERAGE of only \$32.01 for their clothing was spent in 1934 by 700 farm women who served as wardrobe demonstrators in 91 counties of Texas. Clothing records kept for the entire family by 155 farm women in 61 counties showed an average annual expenditure of \$88.33.

THE agricultural adjustment program brought not only cash benefit payments to J. H. Sanders, Tennessee farmer, but ideas about improving his farming system. After 13 years of one-crop farming, the incentive to do something with his idle acres rented to the Government brought him to a realization of the value of the "live-at-home" program. He has also learned other things which he relates in the story about his "Farm Plan That Wins."

THE trend toward pasture and forage crops has taken on added impetus in most States, according to reports received from extension workers. In this issue are presented brief accounts of the plans being carried out in California, Oregon, Vermont, and Wisconsin.



How Shall We Use Our Land

HENRY A. WALLACE

Secretary of Agriculture

A discussion of the report recently submitted by the National Resources Board, whose broad program the President recommends as a guide to future planning.

tation of our forests. In large part that campaign was successful, but its emphasis was on conservation, rather than on utilization. Today the emphasis is on so handling all our natural resources that they will not only be conserved, but will increasingly contribute to the wealth and happiness of the people. Or as the National Resources Board puts it: "If the recommendations contained herein are put into effect, it is believed that they will end the untold waste of our national domain now, and will measurably enrich and enlarge these national treasures as time goes on."

A second premise of the report is that the necessary changes in land use recommended, must be accomplished by democratic methods. We know that no change in the land use of a region can be made satisfactorily until the people of that region understand why it is necessary and have the right to approve or reject it. It is for that reason, among others, that the National Resources Board has emphasized the necessity for State and local, as well as national, planning, and it is for that reason 42 States have already set up State-planning agencies.

Recommendations Made

Of the many specific recommendations in the report, only a few can be mentioned. The land purchase program and the proposed land settlement and reclamation policies are of special interest. Three large and complex problems—the problem of farm surpluses, the problem of submarginal areas, and the problem of the unemployed—have more than anything else pushed the United States into some hard thinking and, finally, some action. Arising from the acute social and economic conditions in many submarginal areas, we now have this proposal to buy submarginal lands and turn them from farming into other and better adapted uses; arising from the surplus problem, and the unemployed problem, we have the proposals for new land settlement and reclamation policies. Of course, what might be an obvious solution to the surplus problem, may run counter to the equally obvious solution

to the problem of the unemployed. Sweeping generalizations, therefore, and clear-cut national decisions, are too much to expect.

The Board recommends the continued retirement of submarginal lands at the rate of about 5 million acres a year for a period now estimated at 15 years. That would involve governmental purchase of 75 million acres of land, now improperly used if at all, contributing in some degree to periodic agricultural surpluses, land afflicted with tax delinquency, hopelessly inadequate schools, roads, and local institutions, and condemning, perhaps, half a million farm families to shockingly low standards of living. On this program of land acquisition the Administration has already started. Lands so acquired will be added to national and State forests and parks, to wild-life refuges, and to Indian reservations.

While it is true that ultimately this land-acquisition program should have some effect on farm production, and on the surplus problems, we cannot expect any quick results from it, nor can we look on it as a complete answer. Its chief aim, after all, is to correct the social and economic evils which have accumulated in these submarginal areas, and to give the people now eking out an existence there a chance to make a living under conditions where the cards are not stacked against them.

Land Settlement

The Board's recommendations on land settlement and reclamation policies strive to resolve some of the conflict between the problem of the surplus and the problem of the unemployed, at the same time keeping in mind the objectives of sound land policy. The Board recommends that the existing homestead and selection laws be repealed to prevent new settlements of submarginal areas and that the States be urged to take corresponding action concerning unorganized State lands; that all lands throughout the country be classified according to problems and probable best uses; and that State and county zoning and purchase of rights over lands, to

THE publication of a report by a governmental body is no longer, I suppose, breath-taking news, but the land-policy report of the National Resources Board stands apart from the common run of reports. In the first place, it is probably the most comprehensive and most adequate statement of our problems of land use yet published; in the second place, it not only states what our land policies ought to be, but it suggests ways of putting them into effect; and in the third place, we have the word of the President that this report will in many respects serve as a guide for public action during this and succeeding years.

The report assumes, and our National and State policies with respect to natural resources ought also to assume, that these priceless resources of land, water, and minerals are for the service of the American people—not just for the few who have the luck and acquisitive skill to get possession of them, but for the service of every man, woman, and child in America. This is the basis upon which our democracy was founded, and the only basis upon which it can remain a democracy. Insofar as we have strayed from that principle during the highly exploitative period of the past, that far have we menaced our democracy. It is the purpose of the report, and quite plainly the purpose of this administration, to make this principle of democracy a living fact.

There was a move toward it a generation ago, when Theodore Roosevelt and Gifford Pinchot, among others, led the campaign to stop the wholesale devasta-

prevent misuse and promote wise use, be encouraged by Federal cooperation.

In relation to subsistence homesteads developed by the Federal Government, the Board recommends their development as rural-urban communities, in which families may raise much of their own food, but depend on local industries for cash income. Decentralization of industry is a necessary part of the long-time development of such communities, and if this decentralization can be secured, there is not much danger that these new settlements will invade the field of commercial agriculture. The Board declares, incidentally, that no steps should "be taken to facilitate any considerable movement of unemployed people from urban areas into commercial agriculture."

Consistent with this policy, the National Resources Board suggests that the general national policy on reclamation "should be to complete and perfect old developments and to utilize them fully so far as practicable before undertaking new ones."

The few recommendations I have cited thus far affect the majority of our farmers only indirectly. Necessarily, the first emphasis is on wise use of the lands owned or controlled by governmental agencies. Yet there are serious problems of land use and conservation which involve lands destined to stay in private ownership, and farm lands particularly. I shall mention only the problem of erosion, which is perhaps as fundamental as any land problem with which our civilization must wrestle. The National Resources Board has three recommendations: First, that we aim at establishing control measures on all of the most seriously eroded areas in not more than 10 years, and effective checking of erosion in not more than 20 years; second, that State cooperation be secured through enactment of regulatory legislation and active work by appropriate State agencies; and third, that farm-mortgage credit and production-adjustment programs of the Federal Government be related to erosion-control activities and conditions.

Erosion Control

When we consider that erosion has already destroyed 35 million acres of farm land, that the top soil has been nearly or wholly removed from another 125 million acres, and that another 100 million acres are starting in that direction, even in the best farming areas in the country—when we consider these facts, we must agree to the necessity for both rescue and preventive work. Because most

Cooperation Beats the Beetle

A COOPERATIVE extension demonstration in 4 counties of Arkansas involved more than 200 farmers and 12,000 acres of peaches. It resulted in a saving of between \$500,000 and \$800,000 for these farmers during 1934.

The problem was the presence of worms in peaches at harvest time. The growers had been unable to determine the need for late control measures, due to the lack of local information, which seriously handicapped the farmers in planning their spraying and dusting activities. As more than 4,000 carloads of peaches are shipped annually from this district, it was deemed a problem of major importance in the extension program.

During 1933 the farmers in Howard County attempted to combat the insect causing the damage. This effort was somewhat weakened by inroads of the pest from neighboring counties. Early in April 1934 a cooperative effort was initiated at a meeting held at Nashville, in Howard County. The meeting was attended by the county agents from Pike, Hempstead, Sevier, and Howard Counties, together with W. G. Amstein, extension horticulturist of the University of Arkansas, and M. P. Jones, extension entomologist of the United States Department of Agriculture.

At this meeting, the life cycle of the plum *Curculio* was discussed and the importance of cooperation between the four counties was emphasized as it related to successful results to be obtained from a campaign against the insect. The

first research effort made was the placing of 11 screen cages at key points in the district and on farms of the cooperating farmers. These cages were baited with a bushel of early-drop peaches which were known to contain worms.

A constant watch was kept on the cages, and as the first adult beetles emerged from the peaches, spray information and warnings were issued in local newspapers and through circular letters to the cooperating farmers.

Another important factor in the success of the campaign was the cleaning up of all early drop peaches. These peaches were destroyed along with the larvae which they contained. Not only did this work add materially to the success of the fight against the insect, but it also gave employment to needy families within the area. County Agent Rodgers, of Howard County estimates that 75 percent of the early-drop peaches were cleaned up and destroyed.

The campaign served not only to obtain needed information on the *Curculio*, but also stimulated interest among the growers in cleaning up their orchards and the surrounding areas. At harvest time, due to this clean-up, very few wormy peaches were left on the ground to harbor the hibernating *Curculio* which would damage the 1935 crop.

The records of this one season's work showed the value of the information which can be obtained from cooperative effort. Such work as this proves to be of great value to farmers in planning their spraying and dusting activities during the danger periods.

of this land is in private ownership, the program can proceed only with the understanding and active cooperation of the owners. Under the Soil Erosion Control Service, the Government has already made a start in this direction.

The authors of the Resources Board report would be the last to suggest that they had done any more than provide the basis for a national policy of land use. Even so, that is an enormous gain, in view of our urgent need for such a policy. Aside from the recommendations governing erosion, and one or two others, the problem of wise land use on individual farms in most areas still rests with the owners and operators of those farms. I hope that the Agricultural Adjustment Administration will be able to contribute something toward helping

farmers solve the problem in the next year or two. Adjustment policies have somehow to be shaped so that the long-time objectives of the new national land policies can be attained.

Individual farmers, to the extent that they need governmental help, ought to be helped to put their lands only to those uses which are economic, which permit soil conservation rather than destruction, and which make for adequate, sustained standards of living through the years. Indirectly the program of the National Resources Board, as it is put into effect during the coming generation, will contribute greatly to that end; but in the better farming areas particularly the burden of responsibility and of opportunity will continue to rest largely with the individual farmer.



An example of unchecked soil erosion near Lumpkin, Stewart County, Ga.

Terracing Saves Georgia Land

HARRY L. BROWN

Director, Georgia Extension Service

THE terracing program in Georgia was started in May 1934 in Cobb County, and this marked the beginning of what I regard as one of the most important extension projects ever undertaken in this State. For many years we have followed the practice of opening new lands as old areas became so badly eroded that they would not produce a profitable crop, but this situation is changing and there now appears to be a very definite trend toward saving the land that is suitable for cultivation and diverting those areas which are not adapted to the production of a cultivated crop to other useful purposes.

In north Georgia and part of south Georgia practically all of the land is rolling and must be terraced if erosion is to be held down, but the problem has been that very few farmers were able to purchase machinery which would build the right kind of terrace, or owned sufficient land to justify its purchase. Consequently, they used their own equipment, consisting usually of a turn plow drawn by mules, and in many instances it was impossible to construct a terrace which would not break when heavy rains came.

Knowing, of course, that the Mangum or broad-base terrace was the type needed on most of our lands, our problem was to find a way to make the proper equipment available for the small farmer as well as for the large, and with which

terraces could be built at a cost that farmers could afford.

Happily, a solution was found to the problem when the Diesel type of tractor made its appearance on the market because it is much more economical than the gas type of machine, and sellers offered the equipment to the counties so that it might be handled on a self-liquidating plan.

The method of financing which is used in most counties is to guarantee the seller about \$1.25 per hour of operation. So far, this has been sufficient to meet the payments and to set up a fund to meet installments for months in which rains may handicap operations.

Since May, 25 counties have followed the example of Cobb County, and have purchased equipment for constructing terraces. So successful has the project been that four of these counties have doubled their facilities for carrying on this work by buying additional outfits. Reports to us indicate that there is an urgent demand for the use of these machines throughout the counties in which they are available, and acreage sufficient for a long period of operation has already been contracted for by farmers.

The equipment being used is a specially designed terracing machine drawn by a track-type tractor, which has proved very satisfactory in building the broad-base terrace.

The cost of construction of terraces of this type has averaged about \$1.62 per

acre in north Georgia and \$1.35 per acre in south Georgia. The lowest cost has been about 75 cents in the southern part of the State and the highest was \$2 in the northern section.

The grades and spacings used are those recommended by the United States Department of Agriculture. Terraces are located by an experienced surveyor and then checked after construction. Where erosion has cut sharply into an area over a comparatively narrow area, the terrace is routed directly across it and the depression is filled in with slip scoops to avoid sudden turns in the rows of crops which, of course, follow the terrace.

An arrangement with the Federal Emergency Relief Administration whereby they are furnishing a State supervisor and an assistant to each county agent, are paying relief labor to build outlets, and render other aid in finishing terraces, has given the project great impetus.

In addition to using the tractors for the construction of terraces, it is anticipated that they will also be in demand and available for use by farmers for turning under winter legumes. As is well known, one of the limiting factors in planting a large acreage of these crops has been that frequently it is impossible to get land in shape properly for the succeeding crop, and also to get good stands, particularly of cotton. With the use of the tractor and a heavy

disk, it is believed that much larger acreages can be planted to winter legumes at a very low cost in counties where these outfits are available.

Details of the terracing project in Georgia have been in charge of the

inspection of the work that is being done on his own farm near Warm Springs. The terracing project is well organized in Meriwether County in which his plantation is located and the Chief Executive had 100 acres terraced

farm record plans and got acquainted with the farmers they were sponsoring.

The Farm Credit Administration contributed an attractive leaflet entitled "How Much Are You Worth?" which was just the right size to go in letters sent out by bankers, extension workers, and others.

In Washington, a card was sent to each of the wheat contract signers in Whitman County, asking if they wished the 1935 record book. Immediately, replies were received from 20 percent of these farmers. More will be reached through meetings.

Many of the States made good use of the illustrative suggestions sent from Washington, D. C. Wyoming used the poster suggestion, "An easy way to (1) find your net worth, (2) determine supplies and equipment you will need, (3) get a list for settling fire losses, (4) to improve your credit rating is to make a farm inventory", on a special sticker used on the letters which were sent from the office. Others used the mimeographed material in letters sent to the county agents. New Jersey made several attractive posters for display in public places throughout the State to call attention to farm inventory week.

With the impetus given by the adjustment campaigns and the development of cooperative credit associations, extension agents are finding much more interest in farm records.



President Roosevelt watches the terracing demonstration on his own farm in Meriwether County, Ga. The President is at the wheel with Director Harry L. Brown beside him. In the rear seat are Under Secretary of Agriculture Tugwell and Mrs. Roosevelt.

county agents who have been assisted by the agricultural engineering specialist. The latter has maintained supervision over each county unit to see that it is operating efficiently and to inspect the work that is being done.

Interest was focused on the State terracing program recently through the appearance of President Roosevelt in an

for which he, of course, paid the established rate in the county.

We feel that the terracing of farm lands in Georgia in a systematic and practical manner is in its infancy and that it will grow and become one of our greatest contributions to the development of a planned agricultural program for the State.

Farmers Take an Inventory

FARM inventory week was observed January 7-12. The agricultural commission of the American Bankers Association and the Farm Credit Administration joined their efforts with those of extension workers to encourage all farmers in the country to take an inventory.

The new Agricultural Adjustment Administration farm record books (3,000,000 of them were out in the field in December) furnished simple forms for taking an inventory. These books were distributed to farmers at meetings when their use was explained. In South Dakota, the record books and inventory plan were explained at district corn-hog conferences so that agents and county leaders would be familiar with them. Since records are such an important part of the adjustment activities, the corn-hog and cotton educational meetings held in January

were also utilized in Oklahoma to explain the new account books. Summaries from the old 1934 books were taken and 1935 books delivered by compliance supervisors when they visited wheat farmers to check on the 1935 wheat compliance. Oklahoma cotton farmers also received the new book with their first 1935 payments. Other States have worked out similar plans of bringing home to the farmer the advantages of farm records and the value of an inventory. Montana held a series of community meetings during January to help farmers complete their 1934 record books, to take off basic data on summary sheets, and to distribute the 1935 record book.

Bankers have helped by becoming sponsors for a certain group of farmers and helping each with his inventory. Bankers attended meetings held to explain the

THE 263 former 4-H club members who are enrolled in Washington State University maintain their active club interest through an organization of their own. It is interesting to note that 112 of these boys and girls are enrolled in the colleges of agriculture and home economics. Their wide-spread interests are reflected in the variety of courses of study they are pursuing at the university. They have enrolled in the following schools: Arts and sciences, 70; agriculture, 64; home economics, 48; mechanic arts and engineering, 22; education, 17; music and fine arts, 16; physical education, 11; veterinary science, 7; pharmacy, 4; and mines 4. Animal husbandry leads the agricultural enrollment with 23 out of 64; 10 out of 22 are taking electrical engineering, and business administration claims 30 of the 70 in the college of arts and sciences.

ENROLLMENT in South Dakota 4-H clubs today exceeds the enrollment on the same date last year by approximately 1,400, a 40-percent increase, reports H. M. Jones, State club leader.

Wildlife Management and the Extension Worker

J. N. DARLING

Chief, Bureau of Biological Survey

"The land-utilization program affords a long-awaited opportunity to restore and increase valuable forms of American wildlife through the establishment of an extensive system of waterfowl refuges and the improvement of environmental conditions for the birds", says Secretary Wallace in his annual report. The interest which extension workers have in wildlife management and the part they can take in this phase of the national land utilization plans is discussed by a well-known leader in wildlife conservation.

PROBABLY historians will remember this decade as a time when forgotten things of importance were brought to mind by the American public, and it is my opinion that posterity will think kindly of us as much for our awakening to the importance of wildlife as for our concern with many other things that until now have been more vivid in our remembrances. Wildlife has for a long time been our forgotten resource, one of the great endowments of nature that we have forgotten to remember, first in our excited exploitation of the continent and later even in our plans for conservation. Wildlife has been forced to take what has been left after any other interest in land use has been satisfied. Today we are beginning to wake up to the disastrous conse-

Now that we are actually thinking seriously about the wildlife problem, there are many bright spots that appear with a new vividness and significance. One of these represents the possibilities of wildlife management on farms. We have 167,000,000 acres of farm wood lots in the United States—an average of 24 acres to a farm, 17 percent of our total farm area. We have marshes and grasslands, thickets, brushy fence rows, orchards, and shrubby roadsides that also are available to the farmers for any use they can find for them. We have extensive areas of submarginal lands and lands taken out of crops. The potential game and other wildlife production of all these areas is immense, yet their possibilities have scarcely been imagined, and it is our privilege today to point the way to a wildlife

development that will benefit the farmers and all the rest of us too. As an individual contribution to the farm income of the country, \$60,000,000 is derived from fur bearers annually and 90 percent of that surprisingly large figure goes to farms where the trapping has been done in the winter months. It probably could be doubled with ease,

and yet this is a small item compared to the possible income from game.

Certainly the farmer must have a prominent part in any Nation-wide program for wildlife, for he is out there where the wild life is actually produced—or not produced. Legislators, conservation officers, sportsmen, and other groups

can do a lot in stimulating public opinion, in finding out ways and means and financing the approved schemes, and in regulating hunting; but all the time it is the farmer that is on the scene where most of the action takes place. Our laws say that the farmer does not own the game, but nearly every hunter who has gone out looking for a day's shooting has a pretty good understanding of the fact that the farmer controls the game. If the landowner destroys the environment and with it the game, even the most liberal laws will do the hunter little good. If game is present, the farmer may prevent hunting by insisting on the observance of trespass laws. So the farmer is in a mighty good position to help out in our program of wildlife restoration.

Profits for Farmers

The farmer is likewise in a position where he can profit by an increase in wildlife, and I am not thinking right now of those intangible benefits that come from the birds' fight against insects and from the pleasing presence of wild animals on the place. These indirect economic and aesthetic factors are important all right, but the presence of game on the farm can also mean additional money in the farmer's pocket, and that I understand is a pretty welcome place for money. The millions of upland-game hunters in this country cannot be accommodated upon public property even by the most heroic efforts of game commissioners. The public must rely on the ordinary farm for most of its excursions after rabbits, squirrels, pheasants, and quail, and the farmer can certainly be reasonably expected to realize some returns for his investment and efforts in wildlife management. Even at



Marshes and ponds available on farms could easily support a great deal of wildlife for the benefit of farmers.

quences of this neglect. Federal, State, and local agencies, and individuals throughout the country are stirring themselves in the interest of wildlife, and it begins to look now as though this valuable resource, now sadly depleted, may be given some measure of restoration.



present, when this activity has not been long emphasized, the sale of hunting privileges and accommodations can well be expected to provide enough to pay taxes.

Wildlife can thus very properly be considered a farm crop, to be encouraged and cultivated and to be included in the harvests that reward the farmer. For the most part, of course, this crop consists of upland species. Occasionally, the sportsman finds a good duck-hunting pond or marsh on one of the farms in his neighborhood, but the majority of these migratory birds spend their fall and winter months on areas that are not classed as farm land. Thus the greatest harvest of game on the farm is from species that are there or in the nearby neighborhood throughout the year, and the farmer for this reason has the better opportunity to control his production of game. It can, in fact, become part of his year-round agricultural practice, and without in any way interfering with his other agricultural objectives.

Extension workers, I am sure, will be particularly interested in the prospects for this means of "extending" the activities of farmers in a way so beneficial generally and locally. It is, indeed, an activity that has fascinating aspects. No group of people enjoys contact with living creatures more than do those who are associated with work on the farm, and there is no group from whom a heartier response can be expected by those who are representing the interests of wildlife. From several points of view wildlife management thus seems to hold out a real appeal to extension workers.

Those who take up this aspect of conservation will find that the groundwork has already been laid (by such handbooks, for instance, as *Farmers' Bulletin 1719* on "Improving the Farm Environment for Wildlife"), and yet it has the appeal of a pioneering activity. We are entering a new era in wildlife conservation, and I hope that the farmer and the extension worker will come right along in with the rest of us.

THE cash earnings of North Carolina live-at-home farmers are only a small part of their real income", says Dr. C. Horace Hamilton, rural sociologist at the North Carolina Agricultural Experiment Station. A recent survey of 98 farm families and 57 representative industrial families showed that the average cash income of both groups was about \$1,000 a year per family.

The farm family paid cash for 40 percent of its living and obtained the other 60 percent directly from the farm. The industrial family paid cash for 96 percent of its living and got 4 percent from the garden.

A Farm Plan That Wins

J. H. SANDERS of Parsons, Tenn., has radically changed his system of farming since the Agricultural Adjustment Administration cotton program went into effect and is making good plans for the future. In the recent "Plant to prosper" contest sponsored by the Commercial Appeal, of Memphis, Tenn., he won over all other contestants in the State in showing the best balance between cotton production and food and feed crops for home use. He does not own any land, but has been renting on the same farm for 14 years. The farm is poor, and the living conditions far from good. Things were going from bad to worse until the cotton program came along and he was classed as a managing share tenant and received a cash benefit payment. From this start, he worked out a different system of farming to use the acres rented to the Government which he described in his own words in the following article.

"For 13 years I have been a one-crop farmer. I planted from 30 to 40 acres in cotton and not much of anything else, making from 14 to 18 bales. I bought everything my family and livestock ate. I did very well until 1930, and then I began to lose. For 3 years I held on to my one crop, but the first of 1934 I rented 14 acres of my cotton land to the Government. I then asked myself what I should do with my idle acres and began to study and plan.

"I took 1 acre for a garden, and put 3 acres in early corn and white peas, 2 acres in sorghum, and 3 acres in cowpeas. I added 3 acres to my pasture and put 1 acre in Irish potatoes, one-half acre in sweetpotatoes, and one-half acre in watermelons. I also fixed 3 hotbeds, 1 in early tomato plants, another for early cabbage, and a third I bedded with 1 bushel of sweetpotatoes.

"For the 1-acre garden, we raised plenty to last us through the summer and canned over 300 quarts. In addition I raised 50 bushels of Irish potatoes, 75 bushels of sweetpotatoes, and dried about 300 pounds of vegetables. We also have 104 gallons of sorghum, 5 bushels of black walnuts, 1,200 pounds of pork, 350 pounds of lard, and 220 pounds of home-grown beef. My poultry flock produced 415 dozen eggs. My 2 cows produced 1,460 gallons of milk and 730 pounds of butter. I also have 17 hogs and 2 mules, and raised 150 bushels of corn and 17 tons of hay to feed my livestock.

"One great mistake we farmers have been making is in not keeping a farm

record book on our productions and sales of everything we buy and sell. I asked a farmer this fall how he came out with this year's crop. He said he had lost. I then asked him whether he had lost on his cotton, corn, livestock, or in buying food for his family and feed for his livestock, but he was unable to tell me. I asked him a few more questions and soon found out why he had lost. He had not kept a farm record book, he had not rented land to the Government, he had bought food and feed on credit, and had raised nothing but cotton, and with the Bankhead bill he couldn't sell his cotton without paying a tax. I keep a book to show everything I buy and sell. Then if I lose money, I can go to my book and figure out the trouble.

"One of the great mistakes a farmer makes is the habit of buying on credit. A man will buy more, use more, and pay more when buying on credit. We farmers should raise enough on the farm to do us and have enough left to exchange for the things we cannot raise. We must turn from the idea of raising all cotton and buying everything else.

"Another way lots of farmers are losing money is in not knowing what kind of fertilizer is best suited for their land. I very often ask farmers what kind of fertilizer they think pays best on our soils. Nine out of ten will say they do not know. I may not know, but I think I do. I use sulphate of ammonia mixed with phosphate, or nitrate of soda mixed with phosphate.

"I feel that every farmer should wake up and see for himself the good he can reap from the 'live-at-home' program, raising and saving sufficient food for his family and livestock, as this is the only hope for the cotton farmer.

"The great need of the southern farmer is a balanced agricultural program to relieve us of the one-crop system. It is true our trade balances run heavily against the cotton farmer, because we do not produce sufficient food to feed ourselves and stock. We can enjoy no independence until we do."

DESPITE the drought, the alfalfa crop on Illinois farms was practically normal, with some fields actually yielding more than the average for the past 20 years. It is estimated that there were more than 375,000 acres of alfalfa in the State last year, and on many farms it proved to be a lifesaver for dairy herds.

Constructive Use of Shifted Acres in 1935

J. F. COX

Chief, Replacement Crops Section, Agricultural Adjustment Administration

SUBSTANTIAL progress in the advancement of the national crop-adjustment programs will result in taking 25 or 30 million acres of cultivated land out of basic commodity production during 1935.

The constructive use of most of this land for pasture and meadow crops, soil-improving and erosion-preventing crops, the production of feed and food for home use, and farm wood lots and windbreaks will be to the advantage of American agriculture.

The proper use of contracted or shifted acres under the provisions of the agricultural adjustment contracts, in increasing the acreage of legumes and grasses for pasture, meadow, and soil-improvement purposes, will place agriculture on a more stable basis. During the 1934 commodity adjustment programs, 90 percent of the 36 million acres in rented and retired fields on the farms of nearly 3 million cooperating signers were used in approved agricultural practices. It is estimated that 30 million acres (not in addition to 1934 figure) will be shifted from basic commodities in the 1935 program.

The adjustment contracts for the 1935 program, requiring acreage reductions, permit and encourage the constructive



Hegari planted on the cotton contracted acres for home feed use in Dona Ana County, N. Mex.

of food and feed crops for home use on the contracted acreage. They approve the establishment of new seedings of pasture, meadow, and soil-improvement crops, and the planting of trees for the farm wood lot, windbreak, or post purposes. While the contracting grower may let the land lie idle, the experience of the past year demonstrated that more than nine-tenths of the signers use the contracted acreage constructively, either for food and feed for home use, or for soil-improvement and erosion-preventing crops. More than four-fifths of the wheat and corn-hog signers followed similar practices.

The wheat contract for 1935 permits the planting of established meadow and pasture crops, erosion-preventing and soil-improving crops, farm wood lots, cultivating land to control weeds and moisture; and in addition to these, the planting of emergency hay and pasture crops to meet the shortage

caused by the drought of 1934. Soybeans, millet, and Sudan grass may be planted and used without restriction for hay, pasture, and roughage purposes on the wheat contracted acreage.

Corn-Hog Contract

The corn-hog contract for 1935, in view of the effect of the drought and the shortage of feed, particularly roughage and hay crops, does not carry a contracted acreage feature. Nevertheless, those who sign the corn-hog contract, and who wish to cooperate to the fullest extent in the adjustment program, are being encouraged to plant the shifted acres taken out of corn production to soil-improvement and erosion-preventing crops, and meadow and pasture crops in general. Contract signers are also encouraged to plant emergency feed and roughage crops, other than corn, in order to build up the reserves depleted by the drought.

A consideration of the grass and legume seed supply shows that in the aggregate there is a sufficient supply of seed of pasture, meadow, and emergency forage crops, including soybeans, to assure material gains in the total acreage of these crops above the normal plantings. The "ammunition" for the constructive use of the retired or shifted acres is available, provided proper adjustments in plantings are made and the best use made of the seed. By preparing the seed beds carefully, and distributing the seed evenly, in many cases reductions can be made in the amount of seed applied per acre.

The seed supplies of legumes, other than red and alsike clover, are adequate in spite of the drought. Recent reports

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Ed Doolittle, farmer of Hamilton County, Iowa, examines alfalfa seed which he purchased with a part of his corn-hog check.

use of this shifted land in ways which will not produce damaging surpluses of other products.

The proposed cotton and tobacco contracts for 1935 provide for the planting

Wisconsin Looks Ahead with Land Plans

DURING the past decade the Wisconsin Agricultural Extension Service has been assisting the central and northern counties of the State in developing and putting into effect sound programs of land utilization. Plans were made on which the farmers and county residents might build a more permanent agriculture and a more satisfying rural life.

Wisconsin's first county zoning ordinance was enacted in May 1933. It was one of the outstanding results of this 10-year program in land utilization. Since the time of this first enactment, 18 counties have enacted similar zoning ordinances, and additional counties are in the process of passing such ordinances. With the final approval of these policies some 5 million acres of marginal land will be closed to future farming activity.

Manifestly, the magnitude and ultimate effect of such control have not yet been fully realized by all local residents. It is doubtful, however, if any new movement in its initial stages has so generally won the support of Wisconsin people as has this distinctly rural zoning program.

Results of a 10-Year Effort

Out of the special series of surveys and studies made in cooperation with the economically distressed counties during the 10-year period some general policies and programs have been adopted by every county. These are: (1) The taking of tax deed to all deedable tax delinquent lands as rapidly as they become deedable; (2) establishing county forest reserves on the larger blocks of nonagricultural lands, not desirable for Federal or State forest areas; (3) withholding from sale isolated lands for farming purposes when it is certain that such sales will work a financial hardship on the town and school district; (4) exchanging with private owners isolated nonagricultural lands for other lands better located in order to block holdings for forestry and recreational purposes; (5) the enactment of (rural) county zoning ordinances; (6) the enactment of county forest ordinances; and (7) the relocation and rehabilitation of isolated settlers now located in the restricted-use districts under zoning ordinances.

Cooperation in Planning

The Agricultural Extension Service with the College of Agriculture staff, in cooperation with the Wisconsin conservation department and the attorney general's department, has assisted county officials in drafting the preliminary zon-

ing ordinance and map, and the more important work of conducting educational meetings preceding official county consideration. Since the beginning of 1933, more than 250 educational meetings have been held by county agents and extension specialists in villages and schoolhouses throughout these counties at the expressed request of the county boards in the counties concerned.

The County Surveys

The surveys made at the request of the counties have been of several types, varying in the degree of completeness of the data. These were made in cooperation with the department of agriculture and markets and the conservation department of the State. The Landlade County study was the most complete survey of this series. A study is made not only of surface plants, trees, and grasses, but the plant life in the lakes and rivers is studied with reference to the fish life it will aid in supporting. In this latter study the hardness of the lake and river water is tested in order that recommendations may be made for planting fish. In Langlade County 110 lakes were tested and surveyed, the kind of fish and plant life determined, and recommendations made for the planting of additional varieties of fish. The study also indicates the protection and feed offered to wild game birds.

Soil types and drainage are two of the factors which are considered in the classification of the land for agricultural uses. Farm-land recommendations are made only after complete studies have been made as to the type of farming which would most likely prove successful upon the available land, factors of farm management, utilization of farm land, and other farming activities. Various factors of settlement, centers of population, and the historic background of the county are other items studied before making suggestions.

Lands are set aside for recreational purposes in either the farming area or in those areas designated for forest purposes.

Problems of Taxation

A very complete and intensive study is made of the problems of taxation. The rates of delinquency, the regions of delinquency, and tax delinquency according to soil types and other agricultural factors are carefully studied. The rates of assessment on land, the local and State requirements for funds from taxation, expenditures, and other items entering into the tax problems are thor-

oughly reviewed. The available and necessary expenditures for roads and schools are carefully detailed in order to more completely understand the situation in the county.

As far as the statute is concerned, it is within the power of the board of supervisors to draw up an ordinance, delineating the use of districts and present it to towns and communities in a "take-it-or-leave-it" fashion. However, it has been thought best to begin directly with the people living in the district and through educational meetings gain their support for the ordinance.

Purposes of Zoning

These meetings serve several purposes and accomplish worth-while things. In the first place, they help to acquaint the people who will later live in the areas with the objects and purposes of zoning. The people have an opportunity to participate in the drafting of the ordinance. Those in charge of the meeting present a tentative ordinance and map together with supporting evidence gained in the survey and invite criticisms and suggestions. The town board members have an opportunity to become familiar with the zoning and to learn the wishes of their constituents. Thus, with the "give-and-take" attitude of these meetings, the boundaries of the land-use districts become "tailor-made."

After these local meetings a county-wide meeting is held to offer an opportunity for discussion with those who have not been in attendance at the local meetings and for final popular approval. After this meeting, and with the approval of all town boards, the county board approves the ordinance and it is placed in effect.

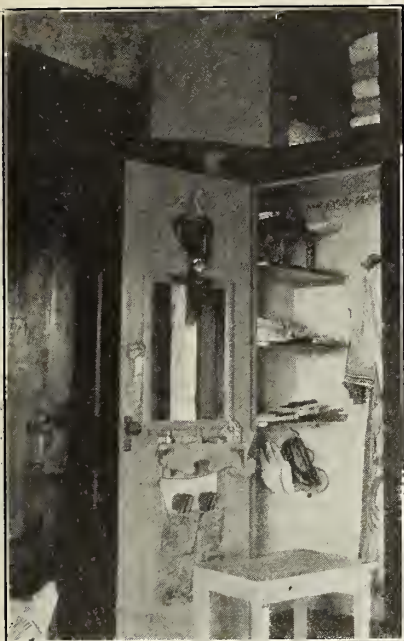
A Beginning Made

A beginning has, therefore, been made in the controlled and orderly development of the cut-over areas of northern Wisconsin through the enactment of these rural zoning ordinances. It is not a new plan, this zoning idea; cities have been following a zoning plan for many years for the benefit and welfare of their citizens. The plan has given to these rural areas a definite destiny in land use.

The next logical step is the relocation and rehabilitation of the isolated settlers now in the restricted-use districts. In this important field of effort the Federal, State, and county extension workers all may have a part and a place in their cooperation with local governing bodies in the educational planning of rural zoning ordinances.

Wardrobe Work Brings Returns to Texas Women

"The women in my county always want more clothing work", said one young home demonstration agent. Because clothing is such a commonplace thing and because it is so easy to interest any woman in clothes, it is not always talked about as much as it might be. Nevertheless, it is important in home demonstration work, and this account of the work in Texas shows how it has served the rural women of that State.



Closet of Mrs. Arthur Jones of Young County showing mirror, vanity shelf, and vanity bench. The light above the mirror can be made to shine either on mirror or into closet.

dress and slip to be entered in the wardrobe contest.

Dresses of class 1 demonstrators entered in the contest are made from print, gingham, pique, or some similar material; whereas dresses of class 2 demonstrators are of some sheer material such as voile or organdie. County winners enter the district contest—Texas is divided into nine districts for farm and home demonstration work. The winners in each district enter the State contest at the farmers' short course held each August at the Agricultural and Mechanical College.

Inventory of Clothing

When the wardrobe demonstrator for the club is chosen in August, the home demonstration agent helps her take an inventory of her clothing and classify it as outer clothing, dresses, headwear, footwear, underclothing, cosmetics, and accessories. The condition of each article is listed as new, good, fair, or poor.

At the same time, purchases for the individual or for the family are decided upon. Depression days have made a dent in the farm income, as everyone knows, but extension service agents have kept sight of this in making out proposed clothing budgets. There is a budget for the woman who can afford to spend only an average of \$25 per year for her clothes, and there are also \$50, \$75, and \$100 budgets.

Farm women can't dress on \$25 per year, you say? Oh, yes, it has been done by ingenuity and hard work. For example, the \$25 budget allows \$2.65 for a nice dress, but Mrs. R. A. Thompson of Carson County did better than that. She made an attractive suit from duck used by a Texas cotton mill to wrap bales of material for cotton picking sacks. The suit is well tailored and resembles linen crash. She spent only 5 cents for thread and 10 cents for tape to bind the seams. A blouse made of sheer sugar sacks, dyed brown, completed her costume. The blouse cost 20 cents for dye and thread, and thus the suit cost only 35 cents in all.

Mrs. Mayette Smith of Travis County saved money by making a coat suit from her husband's old suit at a cost of 25 cents. The two pairs of trousers had been discarded because they were worn thin in the seat. Otherwise they were in perfect condition, so Mrs. Smith made a gored skirt from them and cut the coat over. Red buttons were added to go with a tiny red stripe in the material.

The use of foundation patterns has in itself made possible a great saving in clothing work. From the Travis County mother who has 10 in the family to sew for and "just can't buy patterns for all of them" to the bride of nearly a year



Old wardrobe refinished and used as a storage space by Mrs. Embre Smith of Travis County, at a cost of \$3.25. Of this amount \$2 was paid to have the wardrobe refinished to match the bedroom suite.

in Cameron County who wants to dress well to "live happily ever after", more and more Texas women are putting their faith in these patterns.

This incident really happened on a Jones County farm. The husband—let's

call him Mr. Smith—waited and waited until he almost despaired of getting his cotton check. Then one day he returned from the mail box with his face wreathed in smiles and held out an envelop marked "Extension Service." "Well, let's see the check", his wife exclaimed. But when the envelop was opened out fell a sheet showing how to cut pajamas by a foundation pattern. By some mistake it had been sent to him instead of to Mrs. Smith. He was thoroughly disgusted, but it gave his wife an idea. Mr. Smith was so tall he had to have his clothes made to order, and even so he had never had any pajamas that were long enough. Maybe—yes, his wife cut a skirt pattern for him and then made a pajama pattern from it. Now he has well-fitted pajamas.

Foundation Patterns Used

Foundation pattern work, as well as other wardrobe work, in Texas is organized under the direction of the extension clothing specialist. She holds foundation pattern schools where representative club women from several counties are taught to fit and use foundation patterns. In these demonstrations, one woman or even several women are fitted by the specialist personally, and then the women, working in pairs, fit each other under the supervision of the specialist.

These women in turn take the work back to the members of their individual clubs and teach the club members. One of the goals for cooperators is a well-fitting foundation pattern and a dress and slip made by this pattern, and one of the obligations of being a demonstrator is to help the cooperators fit their patterns.

In addition to keeping records of their expenditures for the year, having foundation patterns and making contest dresses and slips by them, wardrobe demonstrators in Texas must provide proper storage space. That means that boxes for storing clothes, wires hung across the room or nails behind the door must be discarded. Therefore, 8,701 women and girls in Texas provided or improved storage space last year.

One woman tried strategy to persuade her husband to build a closet. This is the story in her own words: "In order to get my husband interested in a clothes closet, I just piled my clothes, his clothes, bed linen, table linen, and all in an old box we had for storage space. Every time he wanted clean clothes he had to turn over everything in the box, and he was lucky to find what he wanted within 30 minutes. I finally got the clothes closet and now my husband is as proud of it as I am."

Mrs. Embre Smith of Travis County made a closet from an old wardrobe

which had been stored in the attic for years. It was grimy inside and out, but the old varnish was cleaned off with a lye solution and the whole surface washed with vinegar. At a cost of \$2 Mrs. Smith had the outside refinished to match her bedroom furniture. The inside she painted ivory. New drawer pulls and a piece of molding for the top cost 50 cents, and the paint cost 75 cents, the entire cost being only \$3.25.

From a monetary standpoint wardrobe work is worth while, but it is even more so in those intangible things not to be counted in dollars and cents—pride in home and accomplishment; poise that comes from knowing that clothes are in style, that they fit, and that accessories harmonize; and training in habits of neatness.

Constructive Use of Shifted Acres in 1935

(Continued from page 23)

of the Bureau of Agricultural Economics indicate a surplus in the alfalfa seed supply, and while a large part of this is not adapted to northern planting, there is sufficient to plant about a half million acres above the normal plantings of alfalfa. The condition of the sweetclover seed supply has improved to the point where the latest information indicates a surplus of seed sufficient to plant a quarter of a million acres in addition to the ordinary seedings of this crop. One of the brightest features in the pasture and meadow crop program for 1935 is the substantial supply of lespedeza seed. This wonderful crop is gaining favor throughout the lower Corn Belt and in the Central and Southern States. Of all legumes, it gives the best record on acid land. With proper usage, there is enough seed of lespedeza to increase the planting nearly 1 million acres above that usually seeded. There are about 15,800,000 pounds of seed available in excess of the amount planted in 1934, resulting from the hold-over supplies of Kobe and Korean seed from 1933 and from the production in 1934 of about two-thirds of the great crop of 1933.

Seed Shortages

The greatest shortages of seed supplies, according to George C. Edler, Bureau of Agricultural Economics, exists in the supplies of seed of timothy, forage sorghums, millet, Sudan grass, and red and alsike clover. There is not enough timothy for half the normal planting, and there is only enough red clover and alsike seed for about 75 percent of the normal acreage.

The drought-reduced supplies of domestic millet and Sudan grass seed are being rapidly augmented by importations. While shortages in adapted varieties of oats and barley for grain purposes exist in many counties of the drought area, there is, nevertheless, an ample supply of oats and barley adapted for use for pasture and grain-hay purposes.

Of the grass seeds for use in planting permanent pasture crops, red top, one of the most valuable for this purpose, is in a strong position, with a surplus of seed above ordinary use sufficient to plant about a million additional acres. There is sufficient Kentucky bluegrass to supply seed for ordinary farm usage.

The soybean crop is the largest on record, according to the December Official Crop Report, being more than 6 million bushels, or about 50 percent larger than the soybean crop of the preceding year. Reports indicate that supplies of soybeans for seed purposes are being held in larger quantities than previously. Soybeans may be used to the extent of several million additional acres in providing a valuable quick-growing leguminous hay crop. This is especially true where clover and timothy, alfalfa and sweetclover seeding have failed throughout the drought-affected region and where chinch bug occurrence is likely. The supply of cowpea seed is nearly normal and the production of velvet beans somewhat above normal.

The normal plantings of grass and clover crops approximate 27,500,000 acres for the Nation, according to Mr. Edler. There is sufficient seed of grass and clover to plant 25 million acres at substantial rates per acre. With the large supply of soybeans available, there is enough seed of grasses, clovers, and other legumes to plant over 30 million acres. Hence, in spite of the effect of the drought on the seed supply, material gains of several million acres may be expected to result, if the contracted or shifted acres are largely planted to new seedings of pasture and meadow crops and soil-improving crops, including soybeans.

The gain in acreage of legumes, such as alfalfa, lespedeza, sweet clover, soybeans, and velvetbeans, that may be expected from the available supplies of seed of these crops, will result in plantings of great importance to our agriculture. This is especially true in view of the greater value of legumes in improving the fertility of our soils and in providing higher protein pasture and hay crops. The superiority of these crops was demonstrated most convincingly during the great drought.

Hawaii Meets Land-Use Problems

F. G. KRAUSS

Director, Hawaii Extension Service

A NOTEWORTHY development in the Hawaii Extension Service is the increasing demand for our services from large plantation interests throughout the Territory. While we have always maintained mutually helpful relations with these large agricultural enterprises, never until the last year or two have these relations been as close as they are now. This is obviously a result of the somewhat drastic curtailment of pineapple production 2 years ago, followed by a less drastic decrease in sugarcane acreage which seems to be required by a recent act of Congress. With the final establishment of Hawaii's sugar quota under the Jones-Costigan Act, our sugar plantations are considering new uses for the lands that may be thrown out of sugar production. The search for other crops suitable for these lands has greatly stimulated demand for reliable data covering our home requirements for agricultural commodities and especially of those imported which might be produced locally. Naturally and very properly, they are turning to us for assistance in this serious problem.

Fortunately, we were not wholly unprepared for this situation. For some years we have been advocating greater diversification of our island industries and have been accumulating a great deal of information about many crops which might profitably be produced here. Much of this has been done in cooperation with the Hawaii Experiment Station, for together we have been prosecuting a vigorous program of investigations and demonstrations, including the establishment of improved pasture forage gardens of which eight 1-acre units are now distributed over the Territory on a more or less permanent basis. Trials of the following cultivated forage crops are now under way in several parts of the Territory; soybeans, peanuts, Hopi beans, pigeon peas, dwarf milo maize, sweetpotatoes, cassava, grain sorghums, and others.

A large number of new and improved varieties of market gardening vegetables, including a half dozen new varieties of Irish potatoes, have been introduced during the past year. By the selection of key men as leaders in many of the more important farming communities, practical field experiments and demonstrations in crop variety tests, fertilizer tests, and cultural tests generally have been instituted. The rice, coffee, and potato ex-

periments and demonstrations being conducted in cooperation with the Hawaii Experiment Station and leading planters are some of the more outstanding contributions made to diversifying and enlarging our agriculture during the year.

Canning of Vegetables

In addition to the above, considerable attention has been given to the canning of such products as tomatoes, string beans, Lima beans, sweetpotatoes, and pigeon peas. The home-economics department of the university, in cooperation with our division, has been conducting very successful experiments indicating that some of these products could be handled profitably on a large commercial scale. Recent experiments with the pigeon peas indicate that this is a potentially important crop, valuable in home cookery and for export either in the dry or canned state.

If Hawaii would develop the starch and vegetable oil industries, in accordance with the basic investigations already made, the probability is that we would be able to solve the problem of producing cheap concentrated feeds for the economical production of prime beef, pork, poultry, and other livestock.

Cooperating in this, the economics, farm management, and marketing division of the Extension Service has instituted comprehensive cost accounting and efficiency studies in a number of our minor agricultural enterprises. Much attention has also been devoted to compiling agricultural statistics, so that we now have records of commodity imports and exports covering a series of years, by monthly periods. Price trends have been plotted from these data and producers have been given this valuable information as a guide toward more conservative planning.

More subsistence farming by the unemployed has been encouraged. Also the small independent farmer and the part-time employees of the plantations have been urged to produce the vegetables they need at home. Our home-economics staff has cooperated in the home production of foodstuffs and demonstrated through its adult women and junior home demonstration clubs the most economical and wholesome methods of cooking. More attractive and economical methods of making clothes and more attractive home surroundings,

both within and without the residence, were emphasized during the year as never before.

We are advocating that our natural agricultural resources be conserved to the fullest extent possible through governmental and private agencies. Every effort is being made to have lands that can be profitably forested brought systematically and persistently under forest cover and to conserve them at almost any cost. Other arable lands are being placed under at least some suitable crop cover, whether it is herbage for pasturage, crops for feeding or sale, or left unmolested. Such a system of agriculture, if it is maintained, will not only conserve the soil and its fertility, but will likewise control weed and insect pests, plant diseases, and a host of other menaces, and at the same time place the land at ready disposal when proper conditions arise for bringing it back to cultivation.

The enlarged and improved forest area which we are advocating would not only contribute to the conservation of our water and land resources and have intrinsic value for timber and possibly as fuel, but if rightly managed may be made a source of great value as parks for recreational purposes for all the people.

THE live-at-home campaign in Churchill County, Nev., was divided into two stages; the first, a campaign for planning adequate home gardens in which assistance was given to more than 300 families in the county. The second stage was that of food production and preservation, in which 37 demonstrations in food preservation were held with 601 persons in attendance.

The circular, which was prepared and distributed to interested club women, aided the families in figuring the amount of food required to meet their winter needs. A total of 305 families adopted the live-at-home plan and 210 women joined in the club's efforts to aid them in making out food and canning budgets. The 305 families reported canning a total of 60,610 quarts of fruits, vegetables, and meats.

One woman, with a family of 7, canned 575 quarts of fruits, vegetables, jellies and jams, and pickles and relish; 275 pounds of meat; and stored more than 2,000 pounds of vegetables.

The Growth of an Idea

Home Owners on a Wyoming Reclamation Project Become Interested in Landscaping

THE years 1933 and 1934 have proved to be very successful ones for extension work on the Willwood reclamation project in Park County, Wyo. They have been especially interesting because of the 3-year home-improvement program started in 1933 by 10 farmers on the project.

During the years of 1929-32, different meetings were conducted on the project in an endeavor to create interest in tree planting and yard improvement. Only a few improvements were made during this time, as most of the farmers thought that they were too busy getting their crops in and caring for them to have time to plant trees. Some said that they did not think they needed the protection around their buildings. Nevertheless, two or three farmers each year were encouraged to start such improvements as the planting of trees, fencing the yard, and placing the buildings in a convenient and permanent location.

Extension principles repeated by the extension forester and the county agricultural agents for 4 years gradually began to bear fruit. In the winter of 1931-32 the Reclamation Bureau built a fine community house in the center of the project, and plans were drawn for landscaping the grounds. The Bureau purchased 300 shelter-belt trees in 1932 and planted them to serve as a shelter belt around the building and grounds. In April of that year the county extension workers, the extension forester, and 25 families from the project journeyed to the canyons west of Cody, Wyo., and collected 50 native shrubs and trees, including dogwood, currant, silverberry, snowberry, chokecherry, black birch, and a few evergreens. At a planting demonstration, attended by 20 people, the next day these were used around the building according to the landscape plan. Interested farmers had previously plowed and leveled the land around the building.

The desire for more attractive home surroundings began to spread, from this time on among the families taking part in the project. In the spring of 1933 the farm owners chose a leader and requested the extension service to initiate a 3-year improvement program with the aim of having every farm establish shelter belts and plant lawns, flowers, and gardens. Ten families joined in the

improvement program in 1933, and in 1934, nine additional families joined. Each family drew up rough landscape plans of their building areas at the suggestion and direction of the project leader and county extension workers. In the spring of each year the extension forester visited each farm entered in the project and discussed arrangements of buildings, what, where, and how to plant, placing these suggestions on each of the plans.

Visits to Farms

In August of each year visits were again made to all farms entered in the program. These inspection visits were arranged as farm tours, and many families visited all places to study advancements made by their neighbors. Native shrubs obtained each spring from the canyons about 60 miles distant were used in most plantings. Many farm families around Powell, Wyo., in dividing their lilacs, honeysuckles, and many perennial flowers kindly offered their surplus plants for use on the project. The project leader collected such plants and distributed them to people taking part in the improvement program.

Nineteen farm homes on the project have shown marked improvements as the result of the first 2 years of the 3-year program, and during the 2 years 12 new lawns have been started. Approximately 500 plantings, consisting of shrubs, flowers, and trees, were made during the 2 years, and 1935 has every assurance of being the banner year for improvements, as already 17 additional families have signified their desire to join in the program. During this 2-year period 16,375 shelter-belt trees were planted in Park County, and it is estimated that fully 8,500 were planted on this irrigation project. The same plan will be followed in 1935, namely, the drawing of plans and the making of plantings according to such plans. An additional plan in 1935 for cooperators

during 1933 and 1934 will be "The Improvement of the View from the Kitchen Window."

The program has been carried as a general improvement campaign rather than on a contest basis, because it is true that there is a closer feeling between cooperators and there is a spirit



Grading the driveway to the community house of the Willwood irrigation project as a demonstration in home improvement.

of helpfulness, one toward another, that is usually not so evident when one is vying with another for a prize.

Mrs. Earl Murray, Powell, Wyo., who has one of the outstanding farm homes for beauty and good plantings, has been the interested and instructive project leader for the past 2 years.

AT THE sound of the gong, 48 4-H club boys rushed from the end of the arena, one from each county exhibiting at the Ak-Sar-Ben Stock Show in Omaha, Nebr. The rush centered on 12 fine feeder calves in the middle of the arena to belong to the first boys who could halter and lead a calf from the ring.

When things had settled and the dust had cleared away, 12 of them owned fine feeder calves, which they agreed to feed and exhibit at the next annual show. The crowd cheered the boys and the calves and thoroughly enjoyed the fun. Twelve cowboy judges aided the calves by eliminating all unnecessary roughness.

Similar entertainment acts were put on at the International Live Stock Show in Chicago and during the National Western Stock Show at Denver, Colo.

Can We Have Regional Adjustment Planning?

IN DEVELOPING a continuing program for agricultural adjustment consideration necessarily has to be given to a large number of factors. It is in connection with the distribution of the national production that some of the most difficult problems of a continuing agricultural adjustment program arise. The problem is difficult, first, because of numerous inter-regional relationships which have arisen as a result of the regional specialization that has developed in our agriculture. Feeder cattle, for example, are produced in the range States and fed out in the Corn Belt. Feed produced in the Corn Belt is shipped to the Northeast, to the South, and to the West

to supplement the feed grown locally. Similar interregional movements take place in finished products ready for direct human consumption. Adjustments in supplies, resulting either from climatic disturbances or conscious effort, tend to upset this normal interregional flow of commodities, thereby bringing the economic interests of farmers in particular regions into apparent conflict with those in other regions.

Everyone is familiar with this continuous competition between regions in the production of particular commodities. When the production of feed grains in the Corn Belt is large, for example, it is likely to result in low prices and low returns to the Corn Belt farmers, but the low prices react to the advantage, temporarily at any rate, of farmers in those regions which are normally deficient in feed production. The Corn Belt farmer, however, in seeking to avoid the effect of the low prices upon his income, likely will expand his production of dairy, poultry, and other products, and in so doing will increase the competition for the dairy and poultry farmers in other regions, and force down the price of their products. High dairy and poultry prices in the East, on the other hand, by encouraging an increased production in that region, will tend to increase the competition for the midwestern producers.

Numerous other examples of a similar kind could be given to illustrate this play of competition between regions. It simply indicates how closely the farmers in one region are linked to those in other

regions. What is done on one farm, or in one region affects all others.

Crop and Livestock Enterprises

Equally as important as the relationships between regions, are relationships of another sort which are not as frequently discussed. I refer to the complementary, supplementary, and com-

Many problems relating to a continuing agricultural adjustment program are being given intensive study by the Production Planning Section of the Agricultural Adjustment Administration. Some of these problems and some of the solutions under consideration are here discussed by F. F. Elliott, Chief of the Section.

peting relationships between crop and livestock enterprises in a particular type of farming area and on an individual farm. Every farmer has a certain amount of resources in the way of land, fixed and working capital, labor force, and the like. The various commodities which he produces or may produce compete for the use of these resources. His major problem, as a farm manager, is to decide the way in which he can combine the various crop and livestock enterprises into a system of farming which will result in the maximum utilization of his resources; in short, to yield him the largest net return.

The way in which farmers in different regions and even in the same region make this combination varies widely. This is, of course, as it should be, since they all do not possess the same resources and are not producing under the same physical and economic conditions. Any scheme of adjustment which is economic and equitable for all farmers concerned must take these regional, area, and individual farm differences into account. If cognizance is to be taken of them, we shall have to give more attention in our adjustment programs to regional and area differences in types of farming and combinations of enterprises on individual farms.

Some people feel, in fact, that both the planning and administrative problems of adjustment could be treated more realistically and be greatly simplified if they were regionalized. To this end it has been suggested that the Agricultural Adjustment Administration set up regional

offices in the important agricultural regions of the country, such as the Corn Belt, Cotton Belt, and hard spring and hard winter wheat regions, within each of which conditions are fairly homogeneous and the farm-management problems of the farmer are similar in character. These regional offices, it is pointed out, should be under the direct charge of a re-

gional supervisor appointed by the Agricultural Adjustment Administration, who would work closely, not only with Washington but also with the agricultural colleges and experiment stations, farm organizations, representative farmers, and other agencies within each region, in bringing together all the facts and suggestions relating to the

need for adjustment, assist in formulating regional plans and carrying through much of the administrative detail now handled in Washington. With respect to administration, it has been suggested that such offices be given the responsibility of the final examination, and auditing of the contracts, of checking compliance, and performing other administrative details, thereby relieving the Washington office of much of the present detailed work and thus speed action in obtaining needed facts from farmers, and in getting information and checks to them.

Technic of Adjustment

Closely allied to this problem of adjustment by regions is the need for the development of a technic of adjustment which will be more scientific and equitable than is the flat percentage-base period method of allotment used in the emergency programs. The base period problem is a particularly troublesome one. The use of the historic base method of adjustment tends to make of past production a sort of vested property right. It tends to perpetuate whatever maladjustments existed in the past between enterprises in the different regions or on the different farms, and to prevent desirable adjustments demanded by changing economic, physical, or climatic conditions. Its use tends to freeze production, both by areas and by individual farms on the basis of past usage of land, which obviously may not be warranted under present or prospective demand conditions. It is important to develop ad-

justments in the light of prospective demand conditions and in harmony with good land use. Although past production in each region or area should be used as a guide in making these adjustments it, by no means, should be the only criterion.

Many suggestions have been advanced for getting away from the most obvious disadvantages of the past base-period, flat-percentage method of adjustment. One proposal is to disregard historical performance altogether and make adjustments by a system of farming approach. It is generally recognized that this is the ideal approach to the problem, but the realization of the present lack of information and personnel for handling this type of approach has led many people to believe that it would not be practicable to attempt it at this time.

Another proposal is to use a combination of the past base-period systems of farming approach to the problem. A specific plan, for example, might call for a given percentage adjustment from some past fixed base period with a further provision that not more than a certain maximum percentage of the crop area be devoted to a certain key crop or crops and not less than some minimum percentage be in hay and pasture, soil-improvement crops, and fallow.

Historical Base

Still another proposal is to determine a historical base for each farm and for each crop or group of crops to be covered by the contract, but ask all producers for a somewhat greater percentage adjustment from the base than is desired as a national net adjustment. That is, if a 10-percent net adjustment is desired, request a 12.5-percent adjustment, and then establish a national pool for each crop or group of crops which would be made up of the acreage or production obtained by the excess adjustment. Each county and each State would share in this national pool in proportion to their base production. Some percentage, say 50 percent of the national pool, would be available to the counties to make adjustments within each of them which are called for by problems of no particular relationship to other counties. Twenty-five percent of the national pool would be available to the States for making adjustments between the various counties in each State which are called for by problems of no particular relationship to other States. The remaining 25 percent of the national pool would be at the disposal of the Secretary for distribution between the various States or particular counties

within a State for making adjustments which will give greater flexibility and tend to allow for desirable regional shifts in production.

As a step toward better balanced systems of farming, it is further proposed that no allotment from the pool be issued to a producer whose percentage of crop area in any crop or group of crops covered by the adjustment contract (after receipt of any allotment from the pool) exceeds the average percentage for the county (township or type of farming area); or, on the other hand, that no allotment from the pool be issued to a producer whose percentage of crop area in rotation grass, hay, idle, fallow, and/or soil-improvement crops is less than the average for the county (township or type of farming area). New producers who have no historic base and old producers with a base or allotment smaller than seems equitable would have first claim upon this national pool. Any portion of the national pool not required for making adjustments of the type just discussed would be distributed pro rata to producers who have established bases or allotments.

As a step toward further flexibility, farmers at their option in a particular county might be permitted to distribute among themselves, through the county committee, their county allotment includ-

ing allotments from the national pool, on the basis of an "intentions-to-plant" report, or any other method the secretary might approve provided it is satisfactory to at least 95 percent of the interested farmers.

Such a method of adjustment would get away from the most obvious disadvantages of the flat percentage-base period approach and would be in line with the main objective of a long-time land program of the conservation of fertility, the minimizing of erosion, and of the obtaining of the use of land according to its specific adaptation.

Either some one of the foregoing or other method of modifying and adjusting individual allotments year by year must be developed in order that the adjustment programs may be effectively continued.

ANOTHER great gain that has been derived from the cotton-control program is the abundance of winter pasture for livestock, says County Agent G. K. Alford, of Grant County, Ark. Instead of bare cotton fields, there are acres and acres of corn or peas or mung beans for pasturing stock this winter. This makes it possible for many families to have their winter supply of home meat, which they would not have had without these feed crops.



New Hampshire orchardist spraying at night to keep ahead of insects and disease and to produce fancy fruit with the smallest possible force of skilled high-priced labor. This is becoming a common sight in the Granite State. The hours from noon to midnight are the recommended day for orchardists who want to avoid spraying against the wind. They can spray with the wind on one side of their trees during the afternoon and on the other side at night after the wind has quieted.

Plan Forage and Pasture Program

Irrigated California Pasture

"The idea of irrigated permanent pastures needs little 'push' in California. It is almost entirely a guiding program because of the enthusiasm of the growers for this new form of forage. I say new form of forage because it is new to us in California", explains J. Earl Coke, California extension specialist in agronomy.

"In the past, this State was not considered adapted to permanent pastures, and, therefore, most of the feed produced has been alfalfa. This has been fed almost entirely in the form of hay.

"Cost studies showed that about 50 percent of the cost of producing dairy products in California is for feed. The studies also showed that about one third of

the cost of producing alfalfa is in the harvesting of the crop. With these facts in mind, growers have been rather quick to realize the importance of a pasture crop in California. In addition, bacteria wilt and dwarf have cut down yields and the life of stands of alfalfa. Also the irrigated pastures have been found well adapted to the shallow lands common in the State and where alfalfa has produced very poorly.

"It looks as though an intensive use of the better irrigated lands in California for pasture would be remunerative to growers there."

Better Vermont Hay and Pasture

"Pasture and hay improvement have been, and probably always will be, the major agronomy project in Vermont", states P. R. Miller, extension agronomist. A large share of Vermont's hay land produces low yields of poor quality. According to the 1930 census the 913,911 acres of all hay yielded an average of 1.25 tons per acre. Alfalfa comprised but 6,805 acres of the total.

To improve the yield and quality of the hay crop, effort is being directed first toward putting the soil into such condition that heavier yields and more legumes can be raised. This implies better tillage practices, greater use of lime, more liberal fertilization, better care and use of manure, supplemented with phosphatic fertilizers.

The use of superphosphate with manure in the stable has been emphasized during the past 2 years. At present

there are 6 of the 14 counties in Vermont carrying on intensive campaigns to promote this practice. Results have been splendid, and satisfactory also in that it ties in well with the dairy and crops program of the State.

The alfalfa program in Addison County, with the slogan "An acre of alfalfa for every dairy cow", resulted in an increase of approximately 1,000 acres this year over the average annual rate of seeding for the past 5 years.

The production of forage and feed crops and pasture improvement are interesting farmers all over the country. Here are presented the plans which a few of the States are putting into effect to meet this demand.

This campaign is taking hold in other counties where lime is available and soil conditions are favorable. For many years pasture-improvement work has interested Vermont farmers as 56 percent of the total farm land in Vermont is devoted to pasture. There are 284,000 acres of open plowable pastures and nearly 590,000 acres of open pasture not plowable and it is on the former that the pasture-improvement program deals.

Emergency Work in Pasture Improvement

The permanent pasture and forage program in Wisconsin was furthered by the Federal Emergency Relief Administration project on lime, which made it possible to distribute hundreds of thousands of tons of lime and marl. "A great deal of consideration will have to be given to seed-bed preparation and other cultural practices to make it possible to seed this acreage with less seed, as with seed higher priced farmers will be saving of their seed", says George M. Briggs, Wisconsin associate agronomist.

A 10-Year Program Still Serves

Climatic and agricultural conditions in different parts of Oregon vary extremely. The rainfall varies from 5 inches per year to more than 100 inches per year, with some part of the State at all points between. Elevations where farming is carried on vary from 10,000 feet down to sea level, sometimes almost that much in one county. It is therefore, extremely difficult to adopt any State-wide forage

program, but each county has its own definite problems and has built up a program of its own.

"We have not changed our program during the years of the depression", reports E. R. Jackman, extension agronomist, "for these programs as originally evolved were apparently so sound that they have not had to be modified any by new conditions, either by the prosperity years or by the depression years which followed."

These county programs were worked out at county economic conferences which Mr. Jackman describes as follows:

"About 1924 we started to hold a series of economic conferences in each county of the State. We spent a great deal of time and considerable money in

gathering all the facts which we thought had any bearing upon the economic development of that county so far as agriculture is concerned. Nowadays we might call them land-planning conferences, but then they were economic conferences. In each county, a program was built up, a program of land development and extension development which has stood the test of time and is still being carried on."

More Pasture Plantings

The acres which the corn-hog adjustment contracts relieved from corn production and those released through the wheat contract were, for the most part, used constructively in Henry County, Ind. Letters calling attention to the possible uses to which contracted acres might be put, were sent to all the contract signers. These letters emphasized the value of starting a field of alfalfa or sweetclover for hay, pasture, or soil improvement.

As a result, many of the farmers established successfully their first fields of alfalfa. Two things surprised most of them, the ability of alfalfa to stand the dry weather and the exceptional stands which were obtained without the use of nurse crops.

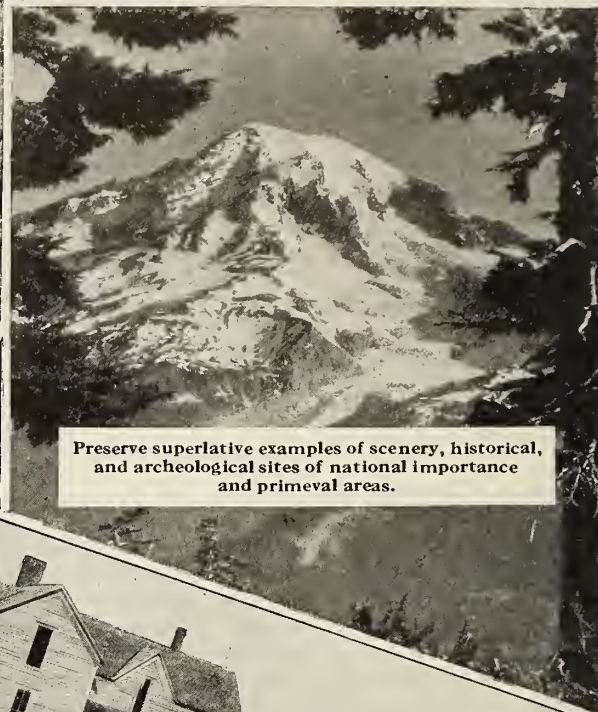
New efforts are being made to further aid these farmers in handling the crop to advantage and to interest additional farmers in this type of crop. These alfalfa plantings have been a step in the adjustment of agriculture in the county.

Needed Changes in Land Use

Some recommendations of the National Resources Board as submitted by the President to Congress on January 4, 1935



Establish control measures on all of the most seriously eroded areas in not more than 10 years.



Preserve superlative examples of scenery, historical, and archeological sites of national importance and primeval areas.



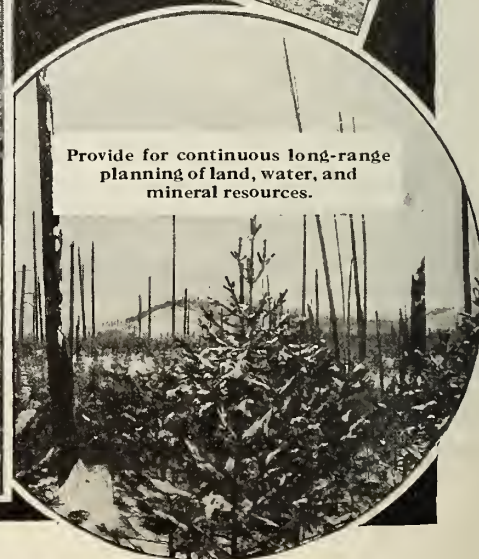
Extend the system of public wildlife refuges for waterfowl and upland game.



Continue retirement of submarginal lands at rate of about 5 million acres per year for a period estimated at 15 years. Develop agricultural production on the most suitable soils only.



Urge States to develop State park systems, and municipalities, to provide a minimum of 1 acre for recreation to each 100 persons.



Provide for continuous long-range planning of land, water, and mineral resources.

FOR ALL THE PEOPLE

THE natural resources of America are the heritage of the whole Nation and should be conserved and utilized for the benefit of all of our people. Our national democracy is built upon the principle that the gains of our civilization are essentially mass

gains and should be administered for the benefit of the many rather than the few; our priceless resources of soil, water, minerals are for the service of the American people, for the promotion of the welfare and well-being of all citizens. The present study of our natural resources is carried through in this spirit and with a desire to make this principle a living fact in America.

The traditional American attitude toward land has been to develop and exploit it as rapidly as possible, with little regard for the consequences. This, to be sure, was the natural attitude of a new Nation reacting against the economic restraints of mercantilism and the remnants of medieval land tenure, and confronted with an apparently illimitable array of resources. This attitude contributed to rapid expansion and development, but at the same time produced a planless crazy-quilt pattern of land use, destroyed or impaired a large proportion of the Nation's irreplaceable resources, and wrecked the hopes and aspirations and the very lives of untold thousands of people.

A study of our national resources, more comprehensive than any previously made, shows the vast amount of necessary and practicable work which needs to be done for the development and preservation of our natural wealth for the enjoyment and advantage of our people in generations to come.

FRANKLIN D. ROOSEVELT.

From an Address delivered before a Joint Session of the two Houses of Congress, January 4, 1935.

In no other field of our economic activity has the doctrine of laissez faire been given freer rein than in the use of our agricultural lands. Farm lands have been used and abused and bought and sold as mere commodities, practically without restriction. Indeed,

the extreme of laissez faire has been reached with respect to some of the Federal Government's own lands, on which unrestricted grazing has been permitted, even to the point of destroying valuable range resources.

The Land Report presents a complete reversal of the attitude of heedless and unplanned land exploitation. It reflects the point of view that public policy should aim at effecting such ownership and use of land as will best subserve general welfare rather than merely private advantage. The report, the most comprehensive ever made on this subject in the United States, takes stock of the probable future requirements for the various products and services of the Nation's lands and inventories the available lands which may be used to satisfy these requirements. It points out glaring maladjustments in present land uses and proposes public policies for correcting such maladjustments and for directing land uses into the most productive channels.

From Report of National Resources Board.

Publications, Film Strips, and Motion Picture Films Available for Use of Extension Workers



The following lists of publications, motion pictures, and film strips by no means cover all of the more important aspects of land utilization. However, they may be of value to extension workers in planning their activities, and additional information may be procured from the U. S. Department of Agriculture.

PUBLICATIONS

(For sale by the Superintendent of Documents, Government Printing Office, Washington, D. C.)

BIBLIOGRAPHY ON LAND SETTLEMENT, with particular reference to small holdings and subsistence homesteads. Misc. Pub. 172. Price 50 cents.

REPORT OF MISSISSIPPI VALLEY COMMITTEE TO THE ADMINISTRATOR OF PUBLIC WORKS, dated October 1, 1934. Price \$1.50.

REPORT OF THE NATIONAL RESOURCES BOARD. Bound volume, \$3.50; also available as separates as follows:

PART I. Report on national planning and public works in relation to natural resources and including land use, and water resources with findings and recommendations \$0.25

PART II. Report of the Land Planning Committee35

PART III. Report of the Water Planning Committee 1.00

PART IV. Report of the Planning Committee for Mineral Policy15

PART V. Report of the Board of Surveys and Maps20

Address U. S. Department of Agriculture for the following:

LAND UTILIZATION IN LAUREL COUNTY, KY., T. B. 289.

THE ECONOMICAL UTILIZATION OF MARGINAL LAND IN NICHOLAS AND WEBSTER COUNTIES, W. VA., T. B. 303.

LAND SETTLEMENT PROBLEMS AND POLICIES IN THE UNITED STATES, T. B. 357.

THE PUBLIC DOMAIN OF NEVADA AND FACTORS AFFECTING ITS USE, T. B. 301.

ECONOMIC ASPECTS OF LAND SETTLEMENT IN THE CUT-OVER REGION OF THE GREAT LAKES STATES, C. 160.

A GRAPHIC SUMMARY OF AMERICAN AGRICULTURE, M. P. 105.

THE PROBLEMS OF "SUBMARGINAL" AREAS, AND DESIRABLE ADJUSTMENTS WITH PARTICULAR REFERENCE TO PUBLIC ACQUISITION OF LAND. PUBLICATION No. 6.

PROCEEDINGS OF THE NATIONAL CONFERENCE ON LAND UTILIZATION, CHICAGO, ILL., NOV. 19-21, 1931.

LAND UTILIZATION. A LIST OF SELECTED REFERENCES COMPILED IN THE DIVISION OF LAND ECONOMICS, BUREAU OF AGRICULTURAL ECONOMICS, UNITED STATES DEPARTMENT OF AGRICULTURE, MAY 1934. (Mimeographed.)

FILM STRIPS

| Series No. | Price | Series No. | Price |
|--|--------|--|--------|
| 207 THE AGRICULTURAL ADJUSTMENT PROGRAM FOR THE SOUTH (47 frames) | \$0.36 | 301 PASTURES AND THEIR IMPORTANCE IN THE NORTHEASTERN AND CORN BELT STATES (56 frames) | \$0.45 |
| 244 SOIL EROSION, A NATIONAL MENACE (95 frames) | .63 | 336 LEGUMINOUS FORAGE CROPS—COASTAL PLAINS REGION (40 frames) | .36 |
| 318 GULLY CONTROL AND TERRACING EXPERIMENTS, EROSION EXPERIMENT FARM, BETHANY, MO. (47 frames) | .36 | 337 LEGUMINOUS FORAGE CROPS—PIEDMONT REGION AND MORE NORTHERN PARTS OF THE NORTH (46 frames) | .36 |
| 341 STOP GULLIES—SAVE YOUR FARM (62 frames) | .45 | 338 LEGUMINOUS FORAGE CROPS—MISSISSIPPI DELTA REGION (50 frames) | .45 |
| 20 PRODUCTION OF ALPACA EAST OF THE 95TH MERIDIAN (47 frames) revised | .36 | 114 FARM FORESTRY IN THE SOUTH (60 frames) | .45 |
| 25 LEGUMINOUS FORAGE CROPS FOR THE NORTH (59 frames) revised | .45 | 219 KEEPING LIVESTOCK OUT OF THE WOODS IN THE NORTH CENTRAL STATES (55 frames) | .45 |
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